



UTILITY OPERATIONS

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March 15, 1997

Regional Administrator
United States Environmental
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President
Reilly Industries, Inc.
1510 Market Square Center
151 North Delaware
Indianapolis, Indiana 46204

RE: United States of America, et al. vs Reilly Tar &
Chemical Corporation, et al.
File No. Civ. 4-80-469
Consent Decree - Part K

Gentleman:

Enclosed is the 1996 annual progress report submitted pursuant to Part K of the Consent Decree in the above captioned matter. This report is issued by the City in accordance with Section 2(a) of the Reilly/St. Louis Park Agreement (Exhibit B to the Consent Decree).

Sincerely,

A handwritten signature in cursive script, appearing to read "Scott E. Anderson".

Scott E. Anderson
Superintendent of Utilities

enclosure
SEA/pmm

cc: William Gregg (w/2 enclosures)
Gary Fuchs (w/o enclosures)
Reilly File
RAP/anrappro

**1996 ANNUAL PROGRESS REPORT
ON THE
IMPLEMENTATION OF THE CONSENT DECREE**

SUBMITTED TO THE

**REGIONAL ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V**

**EXECUTIVE DIRECTOR
MINNESOTA POLLUTION CONTROL AGENCY**

BY

THE CITY OF ST. LOUIS PARK, MINNESOTA

**PURSUANT TO
CONSENT DECREE - PART K**

UNITED STATES OF AMERICA, ET AL.

VS.

REILLY TAR & CHEMICAL CORPORATION, ET AL.

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA
CIVIL NO. 4-80-469**

MARCH 15, 1997

CONTENTS

1.0 INTRODUCTION	1-1
2.0 COMPLETED CONSENT DECREE ACTIVITIES	2-1
3.0 SCHEDULED CONSENT DECREE ACTIVITIES	3-1
4.0 COMPLETED REMEDIAL ACTION PLAN ACTIVITIES	4-1
4.1 CD-RAP Section 3	4-1
4.2 CD-RAP Section 4	4-4
4.3 CD-RAP Section 5	4-4
4.4 CD-RAP Section 6	4-5
4.5 CD-RAP Section 7	4-5
4.6 CD-RAP Section 8	4-8
4.7 CD-RAP Section 9	4-10
4.8 CD-RAP Section 10	4-16
4.9 CD-RAP Section 11	4-16
4.10 CD-RAP Section 12	4-16
5.0 SCHEDULED REMEDIAL ACTION PLAN ACTIVITIES	5-1

LIST OF TABLES

4-1	Status of Remedial Action Plan Activities - 1996	4-2
4-2	W23 1996 Pumpages	4-6
4-3	SLP4 1996 Pumpages	4-7
4-4	W410 1996 Pumpages	4-9
4-5	W420 1996 Pumpages	4-11
4-6	W421 1996 Pumpages	4-12
4-7	W422 1996 Pumpages	4-13
4-8	W439 1996 Pumpages	4-15
5-1	Expected Remedial Action Plan Activities - 1997	5-2

1.0 INTRODUCTION

The Consent Decree in United States of America, et al. vs. Reilly Tar & Chemical Corporation, et al. (U.S. District Court, Minnesota, Civil No. 4-80-469) was signed by Judge Magnuson on September 3, 1986, and entered by the Court on the following day. The Effective Date of the Consent Decree is therefore September 4, 1986 (see Part EE of the Consent Decree).

The Consent Decree requires various actions to be taken by Reilly Industries, Inc. (Reilly), the City of St. Louis Park (City), the United States Environmental Protection Agency (USEPA), the Minnesota Pollution Control Agency (MPCA), and/or the Minnesota Department of Health (MDH). These actions are required by the Consent Decree itself, by the Remedial Action Plan (CD-RAP) (Exhibit A to, and an integral and enforceable part of the Consent Decree, per Part F thereof), or by an Agreement between Reilly and the City (Reilly/City Agreement) (Exhibit B to, and an integral and enforceable part of the Consent Decree, per Part Q thereof, as to the rights and responsibilities between Reilly and the City).

This Annual Progress Report (Report) submitted in accordance with the requirements of Part K of the Consent Decree describes actions taken to implement the requirements of the Consent Decree from January 1 through December 31, 1996. This report also describes activities scheduled for calendar year 1997, as required by Part K.

As an aid to the reader in following the progress of the many activities involved, this Report provides separate descriptions of completed and scheduled activities required by the Consent Decree (Sections 2.0 and 3.0, respectively) and by the CD-RAP (Sections 4.0 and 5.0, respectively). Within each section, areas of activity are discussed in the order in which they are discussed in the Consent Decree and CD-RAP.

2.0 COMPLETED CONSENT DECREE ACTIVITIES

Part K of the Consent Decree requires that Reilly submit annual progress reports to the USEPA and MPCA by March 15, which describe actions taken to implement the requirements of the Consent Decree during the previous year and describe activities scheduled for the year in which the report is released. The 1995 Annual Progress Report was submitted by the City, on behalf of Reilly, on March 15, 1996, pursuant to the requirements of Part K, of the Consent Decree.

Part O of the Consent Decree states that Reilly, the City, the USEPA, or the MPCA may change its designated Project Leader and alternate by notifying the other Parties, in writing, of the change. In correspondence dated May 1, 1996, Reilly informed the Agencies and the City that Reilly's Project manager has changed from James Bratina to Paul Rivers.

Part Y of the Consent Decree requires Reilly to provide the USEPA and MPCA with current certification of insurance for certain specified coverages. Reilly wrote the USEPA and MPCA on July 7, 1987, to request that the excuse granted to Reilly on October 7, 1986, from meeting certain notification requirements for insurance cancellation be extended to July 1, 1988. The USEPA and MPCA approved this request on September 9, 1987. On March 28, 1991, Reilly submitted certificates of insurance for liability coverage, indicating excess coverage was in place. Reilly submitted information in partial compliance with Part Y and informed the Agencies that reasons necessitating an excuse continued to be valid, thereby causing it to request further extension of the excuse (relating to the language of the insurance certificates). As of December 31, 1996, no response had been received from the Agencies.

Part Z of the Consent Decree requires Reilly to deliver to the United States and State of Minnesota by May 31 of each year, a certificate prepared by Reilly's certified public accounting firm which sets forth whether Reilly's consolidated performance is in accord with the requirements established in the Consent Decree. On March 31, 1996, Reilly submitted a certificate prepared by Reilly's certified public accounting firm which sets forth whether Reilly's consolidated performance is in accord with the requirements established in the Consent Decree. Included therewith was a copy of Reilly's Resource Conservation and Recovery Act (RCRA) Financial Responsibility Assurance filing which the USEPA Region 5's RCRA office required under 40 CFR Section 264.143(f)(3). As of December 31, 1996, no response had been received from the Agencies.

3.0 SCHEDULED CONSENT DECREE ACTIVITIES

Part P of the Consent Decree addresses the issue of securing access agreements to conduct the various activities contemplated in the CD-RAP. The City has commenced negotiations with various parties from whom access authorization must be attained based upon the content of Agency correspondence dated May 3, 1989. Said correspondence approved a revision in access agreement language for certain properties owned by the Minneapolis Parks and Recreation Board; however, the Agencies indicated they would review each agreement on a case-by-case basis. Accordingly, individual negotiations will be initiated with each affected property owner whereon the City must perform Consent Decree related activities in 1997 in an effort to secure similar agreements to those which were approved by the Agencies on May 3, 1989.

Part Q of the Consent Decree acknowledges the Reilly/City Agreement as Exhibit B to, and an enforceable part of the Consent Decree. Section 2 of the Reilly/City Agreement provides that by September 3, 1990, if necessary to avoid sanitary sewer charges on the discharge from wells W23, the Drift-Platteville Aquifer source control wells and gradient control well, Reilly shall plan, obtain necessary permits for, and construct a treatment facility and piping to allow effluent from the wells to be discharged to a storm sewer. As noted in Section 2 of the 1991 Report, a treatment facility was made operational in 1991, treating water discharged from wells W23, and the Drift-Platteville Aquifer source control wells. To date, no decision has been made on the disposition of the Drift-Platteville gradient control wells discharge.

Section 9 of the Reilly/City Agreement provides for the payment by one party of costs incurred by the other party or the sharing by the parties thereto of costs incurred by one party in the implementation of the CD-RAP. Within 30 days of the close of the calendar quarter, in which the costs were incurred, the party incurring the costs shall issue a detailed statement of costs, including supporting documentation, and within 30 days of receipt of such notice, the owing party shall pay to the other its share of the costs. It is anticipated the parties will respond to said submittals in accordance with the provisions stated herein.

Part T of the Consent Decree addresses compliance with all applicable local, state, and federal laws and regulations when implementing the Consent Decree. Among its provisions is the requirement that the USEPA and MPCA approve any facility used for off-site disposal of hazardous substances generated during work undertaken pursuant to the Consent Decree. If either Reilly or the City propose to use a facility in 1997, the Agencies must confirm the status of the facility before the shipment of hazardous wastes commences.

Part Y of the Consent Decree requires Reilly to provide the USEPA and MPCA with current certification of insurance for certain specified coverages. Appropriate documentation is due in 1997.

Part Z of the Consent Decree requires Reilly to deliver to the United States and State of Minnesota by May 31, 1997, a certificate prepared by Reilly's certified public accounting firm which sets forth whether Reilly's consolidated performance is in accord with the requirements set forth in the Consent Decree.

4.0 COMPLETED REMEDIAL ACTION PLAN ACTIVITIES

Progress continued in the implementation of the CD-RAP during 1996. Operation of source/gradient control wells occurred throughout the year, impacting flows in the Prairie du Chien-Jordan Aquifer (SLP4), St. Peter Aquifer (W410) and the Drift-Platteville Aquifer (W420, W421, W422, and W439). In addition, monitoring of the Mt. Simon-Hinckley, Iron-ton-Galesville, Prairie du Chien-Jordan, St. Peter, and Drift-Platteville Aquifers was undertaken. Table 4-1 summarizes the progress made in completing the many activities contemplated in the CD-RAP. Further details on the various CD-RAP activities are provided below.

4.1 CD-RAP Section 3

Section 3.3. of the CD-RAP requires Reilly to submit annual Sampling Plans to the USEPA and MPCA. Section 2(a) of the Reilly/City Agreement provides that the City assume all of Reilly's obligations under Section 3 of the CD-RAP. The City submitted its proposed 1997 Sampling Plan on October 31, 1996, in accordance with the requirements of CD-RAP Section 3.3. The City received correspondence from the Agencies dated March 4, 1996, approving the 1996 Sampling Plan, and commenting on the 1996 Sampling Plan. The Agencies' required modifications and comments to be addressed during the 1996 sampling year and to be incorporated into the 1997 Sampling Plan.

The City submitted a letter dated April 26, 1996, to the Agencies responding to comments and questions raised by the Agencies in their March 4, 1996, letter. These comments and questions were addressed in the 1996 sampling year and incorporated into the 1997 Sampling Plan. To date, no response from the Agencies regarding the April 26, 1996, response letter has been received by the City.

The City submitted its proposed 1997 Sampling Plan on October 31, 1996, incorporating comments received from the Agencies' letter dated March 4, 1996. As of the date of this Report, no written response has been provided by the Agencies relative to the City's October 31, 1996, submittal.

Section 3.4. of the CD-RAP requires Reilly to submit an Annual Monitoring Report to the USEPA and MPCA containing the results of all monitoring during the previous calendar year. The City submitted the 1995 Annual Report on behalf of Reilly on March 15, 1996.

TABLE 4-1**Status of Remedial Action Plan Activities - 1996**

RAP Section	Item	Activities
3.2./3.3	1996 Annual Sampling Plan	Plan submitted by City on October 31, 1995; Agency approval issued March 4, 1996
3.2./3.3	1997 Annual Sampling Plan	Plan submitted by City on 10/31/96; Agency approval pending
3.4.	1995 Annual Monitoring Report	Report submitted by City on March 15, 1996. Agency approval issued October 9, 1996.
4.2.	Operation of SLP10/15 and GAC System Operation	Wells pumped the required volume, but were shut off in December 1996. Treatment occurred without incident.
4.3.	GAC System Monitoring	Samples collected as outlined in the Sampling Plan
4.3.5	1995 GAC Annual Report	Report submitted by City on March 15, 1996; Agency approval pending.
5.1.	Mount-Simon Hinckley Monitoring	Completed as outlined in Sampling Plan
6.1.4.	W105 Monitoring	Completed as outlined in CD/RAP, Section 6.1.4
7.1.3.	Operation of W23	Pumping during 1996 occurred without incident
7.2.7.	Operation of SLP4	Experienced control failures in January and February. Pumped without incident the rest of the year.
7.3.	Prairie du Chien-Jordan Aquifer Monitoring	Completed as outlined in Sampling Plan
7.4.2.	Operation of W48	Agencies have not yet decided that well W48 be returned to service.
8.1.3.	St. Peter Aquifer monitoring	Completed as outlined in Sampling Plan.
8.3.	Operation of W410	Pumping during 1996 occurred without incident.
9.1.3.	Operation/monitoring of Drift-Platteville Aquifer source control wells	Pumping during 1996 occurred without incident; quarterly monitoring completed.
9.2.3.	Operation/monitoring of Drift-Platteville Aquifer gradient control well	Pumping during 1996 occurred without incident; quarterly monitoring completed.

TABLE 4-1**Status of Remedial Action Plan Activities - 1996**

RAP Section	Item	Activities
9.3.3.	Drift-Platteville Aquifer monitoring	Completed as outlined in Sampling Plan.
9.5.1.	Operation of W439	Pumping occurred without incident; quarterly monitoring completed.
9.6.	Drift-Platteville Aquifer Monitoring	Completed as outlined in Sampling Plan.
9.7.2.	Platteville Aquifer Gradient control Well W440 and Supplemental Well W434	<p>After installation and development of well W440, it would not produce more than 3 gpm. Well W440 will be abandoned and no permanent pumping will be required at this location.</p> <p>Well W434 wellhouse construction began as scheduled during the 1996 construction season and will be completed in spring 1997.</p>

Insofar as the City is responsible for submitting a report for 1996 activities, the USEPA, MPCA, and Reilly will receive the document under separate cover.

In correspondence dated July 26, 1996, from the Agencies to the City and Reilly, the Agencies provided comments to the 1995 Annual Monitoring Report. The Agencies requested that the comments be addressed so that the Annual Monitoring Report serves as "a stand alone reference tool." The Agencies did not reference whether the 1995 Annual Report was approved in the July 26, 1996, correspondence.

On August 19, 1996, the City submitted a letter addressing the Agencies' comments on the 1995 Annual Monitoring Report. Prior to submittal of the August 19 letter, it was determined that the 1995 Annual Monitoring had not yet been approved by the Agencies.

On October 9, 1996, the Agencies submitted a letter to Reilly and the City stating that the responses to the Agencies' comments in the August 19 letter are acceptable and the 1995 Annual Monitoring Report is approved.

4.2 CD-RAP Section 4

The City operated the Granular Activated Carbon (GAC) treatment system in substantial compliance with Section 4.2 of the Remedial Action Plan (RAP) during 1996, treating 293.702 million gallons (mg) of water pumped from well SLP10. The GAC treatment system operated in a full-time mode from January 1 until September 4 at which time the treatment plant was taken off line due to the rehabilitation project on the ground reservoir. The well 10 pumping system was operated during the off-line months in compliance with CD-RAP Section 4.2.1, pumping at a minimum of 10 million gallons per month with the water being discharged to surface water. During the month of December, the system was not operated due to the reconditioning project at the iron removal plant.

Insofar as Section 4.3.5 of the CD-RAP requires that an annual report of the results of all GAC system monitoring completed in 1996 be reported by March 15, 1997, the City will forward a copy of said report to the USEPA, MPCA, MDH, and Reilly under separate cover by the required date.

4.3 CD-RAP Section 5

Section 5.1 of the CD-RAP requires Reilly to monitor the City's Mt. Simon-Hinckley Aquifer wells on an annual basis. Section 2(a) of the Reilly/City Agreement provides that the City complete this task on behalf of Reilly. The City completed the Mt. Simon-Hinckley Aquifer monitoring in

compliance with Section 5.1 of the CD-RAP, and the results have been presented in an annual report issued in accordance with Section 3.4 of the CD-RAP.

4.4 CD-RAP Section 6

Section 6.1.3 of the CD-RAP requires Reilly to pump well W105 at a monthly average rate of 25 gallons per minute (gpm) until such time as the well's discharge is in compliance with cessation criteria contained in Section 6.1.5. On December 4, 1991, the Agencies authorized the City to discontinue the pumping of well W105, and on December 13, 1991, the well was shut down.

Section 6.1.5 of the CD-RAP requires Reilly to monitor well W105 on an every other year basis. Section 2(a) of the Reilly/Tar Agreement provides that the City complete this task on behalf of Reilly. The City completed the monitoring in accordance with Section 6.1.5 of the CD-RAP in 1996, and will do so again in 1998. The results have been presented in an Annual Report issued in accordance with Section 3.4 of the CD-RAP. No monitoring is required for well W105 in 1997.

4.5 CD-RAP Section 7

Section 7.1.3 of the CD-RAP requires Reilly to pump W23 at a monthly average rate of 50 gpm. Section 2(a) of the Reilly/City Agreement provides that the City operate W23 beginning the day pumping is started. A summary of the 1996 monthly pumpage is presented on Table 4-2. The monthly average flow rate ranged from 48.3 gpm (August) to 52.3 gpm (April) with a total annual average of 50.7 gpm.

Section 7.2.7 of the CD-RAP requires Reilly to pump SLP 4 at a monthly average rate of approximately 900 gpm from October through April and 300 gpm from May through September. Section 2(a) of the Reilly/City Agreement provides that the city assume this obligation for Reilly. A summary of the 1996 monthly pumpage is presented on Table 4-3. Due to control failures with SLP4, the pump did not meet the monthly requirements during early 1996, however, the yearly average rate exceeded 700 gpm.

Section 7.3 of the CD-RAP requires Reilly to monitor the Prairie du Chien-Jordan Aquifer as specified in Section 3 of the CD-RAP. Section 2(a) of the Reilly/City Agreement provides that the city will assume this obligation for Reilly. Monitoring of the aquifer was completed by the City in compliance with Sections 3 and 7.3 of the CD-RAP, and information relative to the monitoring can be found in the 1996 Annual Report submitted pursuant to Section 3.4 of the CD-RAP.

Section 7.4.2 of the CD-RAP authorizes the Agencies to assess the effect of the diminution of the pump stress placed on the Prairie du Chien-Jordan Aquifer (OPCJ) if the pumping rate of

TABLE 4-2
W23 1996 Pumpages

	Total Gallons Pumped	Monthly Average Flow Rate Gallons Per Minute
January	2,281,700	51.1
February	2,072,000	49.6
March	2,301,530	51.6
April	2,259,290	52.3
May	2,279,050	51.1
June	2,125,540	49.2
July	2,278,220	51.0
August	2,153,940	48.3
September	2,183,800	50.6
October	2,284,620	51.2
November	2,217,040	51.3
December	<u>2,281,700</u>	51.1
TOTAL	26,718,430	50.7¹
1 Yearly Average Flow Rate GPM		

TABLE 4-3
SLP4 1996 Pumpages

	Total Gallons Pumped	Monthly Average Flow Rate Gallons Per Minute
January	6,862,000	153.7
February	5,286,000	126.6
March	22,669,000	507.8
April	29,049,000	672.4
May	31,040,000	695.3
June	29,186,000	675.6
July	34,952,000	783.0
August	48,116,000	1,077.9
September	33,837,000	783.2
October	47,136,000	1,055.9
November	37,636,000	871.2
December	<u>44,594,000</u>	999.0
TOTAL	370,363,000	702.7¹
1 Yearly Average Flow Rate GPM		

W48 is changed. In correspondence dated September 3, 1993, the Agencies acknowledged W48 was not being pumped and requested that documentation be provided which indicated that efforts had been taken to ensure that W48 would remain in operation. On September 21, 1993, the City advised the Parties of action taken relative to the operation of W48 and indicated that a ground water flow model would be developed to simulate the pumping of the other wells in the aquifer gradient control network. On April 18, 1994, the City submitted the results of the ground water flow model, and indicated its preference to use well SLP4 as the primary pumping well for achieving gradient control.

On June 7, 1995, the Agencies submitted their own modeling results using the Single Layer Analytical Element Models (SLAEMs) with the objective of evaluating the gradient control system as it is presently implemented in the OPCJ. Based upon the Agencies' modeling results, the Agencies requested that Reilly submit a plan for gradient control modification in order to prevent the spread of ground water exceeding any of the Drinking Water Criteria. On September 11, 1995, ENSR submitted a plan for gradient control system modification for the OPCJ which was approved by the Agencies on October 27, 1995. This approval letter indicated that a mutually acceptable modeling tool currently being finalized by Hennepin County and Justin Blum be used to further evaluate ground water flow and the spread of contaminants in the OPCJ. The Agencies' October 27, 1995, letter also stated that they had not yet decided if well W48 should be returned to service.

As of the date of this report, final results from ground water modeling are not available, and decisions regarding modifications to the gradient control system are pending.

4.6 CD-RAP Section 8

Section 8.3 of the CD-RAP authorizes the USEPA and MPCA to require Reilly to install and operate a gradient control well system for the purpose of preventing the further spread of ground water exceeding any of the Drinking Water Criteria defined in CD-RAP Section 2.2 in the St. Peter Aquifer. Section 2(a) of the Reilly/City Agreement provides that the City complete this task on behalf of Reilly.

In response to April 1, 1991, correspondence from the Agencies on the issue, the City placed W410 in service on May 30, 1991. A summary of the 1996 pumpages is presented in Table 4-4.

A review of the summary indicates W410 was pumped within the parameters proposed by the City (65-100 gpm), with an average yearly rate of 78.4 gpm.

TABLE 4-4
W410 1996 Pumpages

	Total Gallons Pumped	Monthly Average Flow Rate Gallons Per Minute
January	3,705,560	83.0
February	3,570,930	85.5
March	3,686,450	82.6
April	3,537,160	81.9
May	3,352,190	75.1
June	3,241,000	75.0
July	3,323,320	74.4
August	3,349,560	75.0
September	3,242,660	75.1
October	3,357,360	75.2
November	3,244,930	75.1
December	<u>3,705,560</u>	83.0
TOTAL	41,316,680	78.4¹
1 Yearly Average Flow Rate GPM		

Monitoring of St. Peter Aquifer monitor wells occurred in accordance with the provisions of the 1996 Sampling Plan. A report of the results and the effectiveness of well W410 as a gradient control well can be found in the 1996 Annual Report issued pursuant to Section 3.4 of the CD-RAP.

4.7 CD-RAP Section 9

Section 9.1.3 of the CD-RAP requires Reilly to operate the Drift-Platteville Aquifer source control wells at a monthly rate of 25 gpm and monitor them on a quarterly basis. Section 2(a) of the Reilly/City Agreement provides that the City operate the wells beginning the day pumping is started and monitor them as required. Accordingly, the City has operated the wells and has performed necessary periodic inspections as outlined in a plan approved under Section 9.1.1 of the CD-RAP.

Since 1989, the pumping rates of wells (W420, W421) was increased to the maximum extent practicable to achieve the greatest degree of source control. A summary of the 1996 monthly pumpages for wells W420, W421 are presented in Tables 4-5 and 4-6, respectively.

Monitoring of the Drift-Platteville Aquifer source control wells occurred on a quarterly basis pursuant to the requirements of Sections 3.2 and 9.1.3 of the CD-RAP. A report of the results can be found in the 1996 Annual Report issued pursuant to Section 3.4 of the CD-RAP.

Section 9.2.3 of the CD-RAP requires Reilly to operate the Drift Aquifer gradient control well (W422) at a monthly rate of 50 gpm and monitor it on a quarterly basis. Section 2(a) of the Reilly/City Agreement provides that the City operate the well beginning the day pumping is started and monitor it as required. Accordingly, the City has operated the well and has performed necessary periodic inspections as outlined in a plan approved under Section 9.2.1 of the CD-RAP.

A summary of the 1996 pumpage of the Drift Aquifer gradient control well is presented in Table 4-7.

Monitoring of the Drift Aquifer gradient control well occurred on a quarterly basis pursuant to the requirements of Sections 3.3 and 9.2.3 of the CD-RAP. A report of the results can be found in an annual report issued pursuant to Section 3.4 of the CD-RAP.

In accordance with CD-RAP, Sections 9.2.3 and 9.5.1, the City began pumping well W439 (the Northern Area Drift Aquifer Gradient Control Well) at 50 gpm. Well W439 began pumping in January 1996. The Agencies informed the City that inspection had been conducted on January

TABLE 4-5
W420 1996 Pumpages

	Total Gallons Pumped	Monthly Average Flow Rate Gallons Per Minute
January	1,660,370	37.2
February	1,439,490	34.5
March	1,601,930	35.9
April	1,587,890	36.8
May	1,678,090	37.6
June	1,615,680	37.4
July	1,690,490	37.9
August	1,667,770	37.4
September	1,599,920	37.0
October	1,578,490	35.4
November	1,555,690	36.0
December	<u>1,660,370</u>	37.2
TOTAL	19,336,180	36.7¹
1 Yearly Average Flow Rate GPM		

TABLE 4-6
W421 1996 Pumpages

	Total Gallons Pumped	Monthly Average Flow Rate Gallons Per Minute
January	1,247,170	27.9
February	1,111,740	26.6
March	1,252,540	28.1
April	1,222,050	28.3
May	1,261,590	28.3
June	1,215,910	28.1
July	1,256,540	28.1
August	1,245,880	27.9
September	1,217,450	28.2
October	1,222,350	27.4
November	1,223,570	28.3
December	<u>1,247,170</u>	27.9
TOTAL	14,723,980	27.9¹
1 Yearly Average Flow Rate GPM		

TABLE 4-7
W422 1996 Pumpages

	Total Gallons Pumped	Monthly Average Flow Rate Gallons Per Minute
January	2,919,250	65.4
February	2,409,550	57.7
March	2,568,870	57.5
April	2,599,700	60.2
May	3,076,590	68.9
June	3,034,090	70.2
July	3,030,330	67.9
August	3,045,080	68.2
September	3,038,070	70.3
October	2,721,910	61.0
November	3,031,400	70.2
December	<u>2,919,250</u>	65.4
TOTAL	34,394,090	65.3¹
1 Yearly Average Flow Rate GPM		

3, 1996, and the remedial action for the Drift Aquifer Northern Area was approved in total. A summary of the 1996 pumpage of the Northern Area Drift Aquifer Gradient Control well is presented in Table 4-8.

Monitoring of the Northern Area Drift Aquifer Gradient Control Well occurred on a quarterly basis pursuant to the requirements of Sections 3.2 and 9.2.3 of the CD-RAP. A report of the results can be found in the 1996 Annual Report issued pursuant to Section 3.4 of the CD-RAP.

In accordance with Section 9.7.2 of the CD-RAP, the City requested the Agencies to allow an additional gradient control well for the Platteville Aquifer. On August 15, 1994, the City requested the addition of well W434, which is located upgradient of the buried bedrock valley mapped by Hult and Schoenburg in U.S. Geological Survey Water Supply Paper 2211, Plate 2. The Agencies approved the addition of well W434 on September 29, 1994.

On May 9, 1995, the Agencies submitted to the City and Reilly a letter which stated that the Report "Platteville Aquifer Gradient Control Well W434 Wellhouse Construction Work Plan" is approved.

The Platteville Aquifer Gradient Control Well W434 was scheduled to be constructed in conjunction with well W440. Well W440 did not meet expectations and the construction was terminated by the City, as directed by the Agencies. Well W434 wellhouse construction began as scheduled during the 1996 construction season.

The construction of wellhouse W434 was delayed due to licensing and permits required by the City. These delays extended the work schedule into late November 1996. The winter weather limited work on the site and as a result, the project will not be completed until spring 1997. We anticipate the well to be available for inspection by the Agencies on May 24, 1997.

In a letter dated December 19, 1996, the City requested an extension on the Construction Work Plan for well W434 until May 24, 1997.

On July 24, 1995, the Agencies issued a letter informing the City and Reilly that on June 30, 1995, the Agencies issued a Record of Decision (ROD) regarding remedial actions for the Northern Area of the Platteville Aquifer. The letter also requested that Reilly submit a plan for the gradient control system within 90 days.

The Agencies issued a letter dated November 28, 1995, to the City and Reilly approving the Northern Area Platteville Aquifer Gradient Control Well W440 Work Plan with a few modifications and comments as specified.

TABLE 4-8
W439 1996 Pumpages

	Total Gallons Pumped	Monthly Average Flow Rate Gallons Per Minute
January	2,398,600	53.7
February	2,242,730	53.7
March	2,450,750	54.9
April	2,418,420	56.0
May	2,516,720	56.4
June	2,383,620	55.2
July	2,466,970	55.3
August	2,424,990	54.3
September	2,350,650	54.4
October	2,400,110	53.8
November	2,320,730	53.7
December	<u>2,398,600</u>	53.7
TOTAL	28,771,890	54.6¹
1 Yearly Average Flow Rate GPM		

Well W440 was installed during the week of July 15, 1996, in accordance with the approved Work Plan. After installing and developing well W440, it was determined that the well would not yield more than 3 gpm. Following discussions with the MPCA, it was agreed upon that well W440 be terminated by the City.

4.8 CD-RAP Section 10

Section 10.1.1 and 10.2.1 of the CD-RAP requires Reilly to submit to the USEPA, MPCA and MDH a plan for investigating certain multi-aquifer wells that may be adversely affecting the Mt. Simon-Hinckley, Ironton-Galesville, Prairie du Chien-Jordan and St. Peter Aquifers.

On July 6, 1995, the MPCA issued a letter to the City and Reilly, regarding review of the report for Leaking Deep Multi-Aquifer Wells and St. Peter Aquifer Multi-Aquifer Wells. In these reports, the City stated that no further St. Peter and Deep Multi-Aquifer wells are believed to exist in the study area that require abandonment. The Agencies' July 6, 1995, letter approved both of these reports. No further work is required at this time.

4.9 CD-RAP Section 11

Section 11.5.1 of the CD-RAP requires the City to prepare a plan which addresses, among other things, actions to place an adequate soil and vegetative cover as needed to prevent soil erosion on city parks on the Site. This work is ongoing.

4.10 CD-RAP Section 12

The Utility Superintendent will review all data upon receipt from laboratory. The Utility Superintendent will be responsible to notify the Project Leader and Agencies of all exceedances of the Drinking Water Criteria, as outlined in Section 12.1.1 of the CD-RAP.

In a letter inadvertently dated November 14, 1996, corrected to October 14, 1996, the Utility Superintendent notified the Agencies that SLP6 had exceeded the advisory level (175 mg/l other PAH) established in Section 2.2 of the CD-RAP. Pursuant to Section 12.1.1 of the CD-RAP, the City will continue monthly sampling.

5.0 SCHEDULED REMEDIAL ACTION PLAN ACTIVITIES

Table 5-1 summarizes the expected schedule for CD-RAP activities during 1997. Many of the schedule dates cannot be established definitely because they depend on Agency review, inspection, and approval. Ground water monitoring is an essential ongoing task.

TABLE 5-1**Expected Remedial Action Plan Activities - 1997**

RAP Section	Item	Expected Timetable
3.3	Sampling Plan for 1997	Agency approval due
3.3	Sampling Plan for 1998	City to submit plan 10/31/97
3.4	1996 Annual Report	City to submit report 3/15/97
4.3	GAC Plant Monitoring	Continued monitoring in accordance with the RAP
4.3.5	1996 GAC Annual Report	City to submit report 3/15/97
5.1	Mt. Simon-Hinckley Aquifer Monitoring	Refer to Sampling Plan
6.1.4	W105 Monitoring	Not required until 1998
7.1.3	Operation of W23	Ongoing
7.2.7	SLP4 Operation	Ongoing
7.3	Prairie du Chien-Jordan Aquifer Monitoring	Refer to Sampling Plan
7.4.2	Operation of W48/Computer Modeling	Ongoing
8.1.3	St. Peter Aquifer Monitoring	Refer to Sampling Plan
8.3	St. Peter Aquifer Remedial Action Gradient Control Well Operation - W410	Ongoing
9.1.3	Monitoring Drift-Platteville Aquifer Source Control Wells	Refer to Sampling Plan
9.2.3	Monitoring Drift-Platteville Aquifer Gradient Control Well	Refer to Sampling Plan
9.3.3	Drift-Platteville Aquifer Monitoring	Refer to Sampling Plan
9.5.1	Drift Aquifer Gradient Control Well Operation - W439	Ongoing
9.6	Drift-Platteville Aquifer Monitoring	Refer to Sampling Plan
9.7.2	Well W434 - Platteville Aquifer Gradient Control Well	Completion of well W434 wellhouse spring 1997